

REMARKS

Claims 1-55 are pending in the above-captioned patent application after this amendment. Claims 1-50 have been rejected. The specification has been objected to. Claims 24, 25 and 27-50 have been objected to.

The Applicant respectfully disagrees with the rejection of claims 1-50. However, the Applicant has amended claims 1, 3, 9, 12, 14, 24-47, 49 and 50, and added new claims 51-55 with this amendment for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office (65 Fed. Reg. 54603), and/or to clarify what the Applicant regards as the present invention.

Support for the amendments to claims 1, 3, 9, 12, 14, 24-47, 49 and 50 can be found throughout the originally filed specification. In particular, support for the amendments to claims 1, 3, 9, 12, 14, 24-47, 49 and 50 can be found in the specification at least at page 9, lines 20-34, at page 16, lines 1-7, at page 20, line 19 through page 21, line 5, at page 31, line 27 through page 32, line 21, in Figures 2A-2D, 5A and 5B, and in the originally filed claims.

New claims 51-55 respectively, are based on original claims 24, 25, 48, 49 and 50 respectively. More specifically, claim 51 is based on claim 24 rewritten in independent form, claim 52 is based on claim 25 rewritten in independent form, and claim 53 is based on claim 48 rewritten in independent form.

No new matter is believed to have been added by this amendment. Reconsideration of the pending application is respectfully requested.

Objections to the Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. More particularly, regarding claim 49, the Examiner contends that that the specification does not disclose any method of making a wafer.

The Applicant has amended claim 49 with this amendment to cite positive steps for the making of a wafer. Additionally, the Applicant respectfully submits that the specification provides a method or process for making a wafer and transferring a pattern onto the wafer at least at page 31, line 27 through page 32, line 21 and in Figures 5A and 5B. Accordingly, the Applicant respectfully requests that the objection to the specification be withdrawn.

Objections to the Claims

Claims 24, 25 and 27-50 are objected to. More particularly, claims 24, 25 and 48-50 are objected to "as being improper dependent claims." Additionally, claims 27-50 are objected to because they do not "set forth any positive steps involved in the method/process, (so) it is not apparent what method/process applicant is intending to encompass." Further, claim 49 is objected to as having "no transitional phrase", so "it is unclear what active positive steps define the method."

In response, the Applicant has amended claims 24, 25, 27-47, 49 and 50 to provide active steps for the processes and/or methods being claimed. The Applicant respectfully submits that claim 48 as originally drafted contained positive steps for the method of making an exposure apparatus. Accordingly, the Applicant respectfully submits that the objections to claims 24, 25 and 27-50 have been overcome, and the Applicant respectfully requests that the objections to claims 24, 25 and 27-50 be withdrawn.

Rejections for Double Patenting

Claims 1-3 and 26-28 are rejected under the judicially created doctrine of obviousness-type double patenting. More particularly, claims 1, 2, 26 and 27 were rejected under the judicially created doctrine of obviousness-type double patenting over claim 3 of prior U.S. Patent No. 6,757,053. The applicant respectfully submits that this rejection should be withdrawn.

More specifically, claims 1, 2, 26, and 27 and claim 3 of prior U.S. Patent No. 6,757,053 are of different scopes and claims 1, 2, 26, and 27 of the present invention are believed to be patentably distinct from claim 3 of prior U.S. Patent No. 6,757,053. For example, claim 3 of prior U.S. Patent No. 6,757,053 requires "a reaction mass assembly including an X reaction component and a Y reaction component that are coupled to the stage mover assembly, the X reaction component including a pair of spaced apart X reaction masses and the Y reaction component including a pair of spaced apart Y reaction masses, the X reaction component moving relative to the Y reaction component along an X axis, the X reaction component and the Y reaction component moving concurrently along a Y axis relative to the stage base..." Claims 1, 2, 26, and 27 of the present application do not contain this limitation. Accordingly, the applicant submits

that this rejection should be withdrawn.

Further, claims 3 and 28 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 3 and 4 of prior U.S. Patent No. 6,757,053. The applicant respectfully submits that this rejection should be withdrawn.

More specifically, claims 3 and 28, and claims 3 and 4 of prior U.S. Patent No. 6,757,053 are of different scopes and claims 3 and 28 of the present invention are believed to be patentably distinct from claims 3 and 4 of prior U.S. Patent No. 6,757,053. For example, claim 3 of prior U.S. Patent No. 6,757,053 requires “a reaction mass assembly including an X reaction component and a Y reaction component that are coupled to the stage mover assembly, the X reaction component including a pair of spaced apart X reaction masses and the Y reaction component including a pair of spaced apart Y reaction masses, the X reaction component moving relative to the Y reaction component along an X axis, the X reaction component and the Y reaction component moving concurrently along a Y axis relative to the stage base...”. Further, claim 4 of prior U.S. Patent No. 6,757,053 requires “a reaction mass assembly coupled to the stage mover assembly, the reaction mass assembly being adapted to reduce the reaction forces along the X axis and along the Y axis, the reaction mass assembly including an X reaction component and a Y reaction component, the X reaction component moving relative to the stage base along the X axis, the X reaction component moving relative to the Y reaction component along the X axis and along the Y axis, and the X reaction component and the Y reaction component move concurrently along the Y axis...”. Claims 3 and 28 of the present application do not contain these limitations. Accordingly, the applicant submits that this rejection should be withdrawn.

Rejections Under 35 U.S.C. § 102(b)

Claims 1-4, 6-9, 13, 15-17, 19-29, 31-34, 38, 40-42, 44-46 and 48-50 are rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent Application Publication No. 2002/0075469 filed by Tanaka (“Tanaka”). The Applicant respectfully traverses the rejection of these claims, and respectfully submits that the rejection of claims 1-4, 6-9, 13, 15-17, 19-29, 31-34, 38, 40-42, 44-46 and 48-50 is unsupported by the art and should be withdrawn.

More particularly, the Examiner contends that Tanaka teaches in Figures 1-3, a stage assembly comprising: a stage that retains the device; a stage mover assembly connected to the stage, which moves the stage and generates reaction forces; and a reaction assembly coupled to the stage mover assembly, the reaction assembly including a first reaction subassembly having a first mass, a second reaction subassembly having a second mass, and a connector assembly that connects the reaction subassemblies together and allows for relative movement of the masses with at least one degree of freedom and inhibits relative movement of the masses with at least one degree of freedom, and otherwise teaches various features as claimed in the present invention. The Applicant respectfully submits that the Patent Office has misconstrued this reference.

For example, the embodiment illustrated in Figures 1-4 of Tanaka is directed to a stage device comprising: a wafer stage WST for supporting a wafer W; a driving mechanism 54 for driving the wafer stage WST; mounting members 106A, 106B, 106C and 106D; shock absorbers 110A and 110B; shock absorbers 96X₁ and 96X₂; shock absorbers 96Y₁ and 96Y₂; and reaction frame 46. The driving mechanism 54 includes: an X-axis guide 62 provided with slider units 60A and 60B at the longitudinal ends thereof for guiding the movement of the wafer stage WST as the wafer stage WST is being driven along the X-axis; and a pair of Y-axis guides 58A and 58B for guiding the movement of the wafer stage WST and the X-axis guide 62 as the wafer stage WST and the X-axis guide 62 are being driven along the Y-axis.

Mounting members 106A and 106B are fixed to the ends of Y-axis guide 58A, and mounting members 106C and 106D are fixed to the ends of Y-axis guide 58B. Shock absorber 110A extends between mounting member 106A and mounting member 106C, and shock absorber 110B extends between mounting member 106B and mounting member 106D. Therefore, shock absorbers 110A and 110B effectively extend between Y-axis guides 58A and 58B and connect Y-axis guides 58A and 58B to each other. Further, shock absorbers 96X₁ and 96X₂ are secured to mounting members 106A and 106B, respectively, and extend between the mounting members 106A and 106B and the reaction frame 46, thereby effectively connecting Y-axis guide 58A to the reaction frame 46. Still further, shock absorbers 96Y₁ and 96Y₂ are secured to mounting members 106B and 106D, respectively, and extend between mounting members 106B and 106D and the

reaction frame 46, thereby effectively connecting Y-axis guides 58A and 58B to the reaction frame 46. With this design, the reaction forces are transmitted to the reaction frame 46 via shock absorbers 96X₁ and 96X₂, and shock absorbers 96Y₁ and 96Y₂, and are subsequently discharged to the floor. (Tanaka Abstract, paragraphs 78-80, paragraph 100, paragraph 102, paragraphs 110-113, paragraphs 125-127, and in Figures 1-4).

The shock absorbers 110A and 110B of Tanaka do connect the Y-axis guides 58A and 58B together and allow for relative movement of the Y-axis guides 58A and 58B with one degree of freedom. However, the shock absorbers 110A and 110B of Tanaka do not inhibit relative movement of the Y-axis guides 58A and 58B with at least one degree of freedom.

In distinction to Tanaka, claim 1 of the present application recites “(a) stage assembly ... comprising: a stage that retains the device; a stage mover assembly connected to the stage, the stage mover assembly moving the stage along a first axis and generating reaction forces; and a reaction assembly coupled to the stage mover assembly, the reaction assembly including a first reaction subassembly having a first mass that is movable along the first axis, a second reaction subassembly having a second mass that is movable along the first axis, and a connector assembly that connects the reaction subassemblies together, allows for relative movement of the masses with at least one degree of freedom and inhibits relative movement of the masses with at least one degree of freedom.”

Because Tanaka does not disclose all of the elements of claim 1, the § 102(b) rejection is unsupported by the art and should be withdrawn. Because claims 2-4, 6-9, 13, 15-17, 19-25 depend either directly or indirectly upon claim 1, the rejection of claims 2-4, 6-9, 13, 15-17, 19-25 under 35 U.S.C. § 102(b) is also unsupported by the art and should be withdrawn.

Additionally, in distinction to Tanaka, claim 26 of the present application recites “(a) method for making a stage assembly ... comprising the steps of: providing a stage that retains the device; connecting a stage mover assembly to the stage, the stage mover assembly moving the stage along a first axis and generating reaction forces; and coupling a reaction assembly to the stage mover assembly, the reaction assembly including a first reaction subassembly having a first mass that is movable along the first

axis, a second reaction subassembly having a second mass that is movable along the first axis, and a connector assembly that connects the reaction subassemblies together, allows for relative movement of the masses with at least one degree of freedom and inhibits relative movement of the masses with at least one degree of freedom.”

Because Tanaka does not disclose all of the elements of claim 26, the § 102(b) rejection is unsupported by the art and should be withdrawn. Because claims 27-29, 31-34, 38, 40-42, 44-46 and 48-50 depend either directly or indirectly upon claim 26, the rejection of claims 27-29, 31-34, 38, 40-42, 44-46 and 48-50 under 35 U.S.C. § 102(b) is also unsupported by the art and should be withdrawn.

Rejections Under 35 U.S.C. § 103(a)

Claims 5, 10-12, 14, 18, 30, 35-37, 39 and 43

Claims 5, 10-12, 14, 18, 30, 35-37, 39 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of U.S. Patent Application Publication No. 2003/0184724 filed by Ono et al. (“Ono et al.”).

As noted above, the rejection of claim 1 is unsupported by the art. Accordingly, claims 5, 10-12, 14 and 18, which directly or indirectly depend from claim 1 are patentable.

Further, as noted above, the rejection of claim 26 is unsupported by the art. Accordingly, claims 30, 35-37, 39 and 43, which directly or indirectly depend from claim 26 are patentable.

Claim 22

Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of U.S. Patent No. 5,040,431 issued to Sakino et al. (“Sakino et al.”).

As noted above, the rejection of claim 1 is unsupported by the art. Accordingly, claim 22, which indirectly depends from claim 1 is patentable.

Claim 47

Claim 47 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of U.S. Patent Application Publication No. 2004/0145715 filed by Takashima (“Takashima”).

As noted above, the rejection of claim 26 is unsupported by the art. Accordingly, claim 47, which directly depends from claim 26 is patentable.

New Claims


New claims 51-55 have also been added with this amendment. As provided above, new claims 51-55 respectively, are based on original claims 24, 25, 48, 49 and 50 respectively. Further, as provided above, the shock absorbers 110A and 110B of Tanaka do not inhibit relative movement of the Y-axis guides 58A and 58B with at least one degree of freedom. Accordingly, claims 51-55 are believed to be patentable over Tanaka.

CONCLUSION

In conclusion, the Applicant respectfully asserts that claims 1-55 are patentable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this 8th day of December 2005.

Respectfully submitted,


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